APPENDIX

SEQ ID N°	SEQUENCE INFORMATION	
SEQ ID N° 1	*D.melanogaster* SD07655 cDNA (= DmMRP4b8d)	
SEQ ID N° 2	Ag MRP1a	
SEQ ID N° 3	Ag MRP1b	
SEQ ID N° 4	Ag MRP1c	
SEQ ID N° 5	Ag MRP1d	
SEQ ID N° 6	human MRP	
SEQ ID N° 7	exon 4'a DmMRP	
SEQ ID N° 8	exon 4 b DmMRP	
SEQ ID N° 9	exon 8 a DmMRP	
SEQ ID N° 10	exon 8 b DmMRP	
SEQ ID N° 11	exon 8 c DmMRP	
SEQ ID N° 12	exon 8 d DmMRP	
SEQ ID N° 13	exon 8 e DmMRP	
SEQ ID N° 14	exon 8 f DmMRP	
SEQ ID N° 15	exon 8 g DmMRP	
SEQ ID N° 16	DmMRP 4a8a	
SEQ ID N° 17	DmMRP 4a8b	
SEQ ID N° 18	DmMRP 4a8c	
SEQ ID N° 19	DmMRP 4a8d	
SEQ ID N° 20	DmMRP 4a8e	
SEQ ID N° 21	DmMRP 4a8f	
SEQ ID N° 22	DmMRP 4a8g	
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SEQ ID N° 24	DmMRP 4b8b	
SEQ ID N° 25	DmMRP 4b8c	
SEQ ID N° 26	DmMRP 4b8e	
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SEQ ID N° 28	DmMRP 4b8g	
SEQ ID N° 29	Primer Dr2for	(table 2)
SEQ ID N° 30	Primer Dr6rev	(table 2)
SEQ ID N° 31	Primer Dr4arev	(table 2)
SEQ ID N° 32	Primer Dr4brev	(table 2)
SEQ ID N° 33	Primer DR17	(table 2)
SEQ ID N° 34	Primer DR18	(table 2)
SEQ ID N° 35	Primer rev 8	(table 2)
SEQ ID N° 36	Primer 8a	(table 2)
SEQ ID N° 37	Primer 8b	(table 2)
SEQ ID N° 38	Primer 8c	(table 2)
SEQ ID N° 39	Primer 8d	(table 2)
SEQ ID N° 40	Primer 8e	(table 2)
SEQ ID N° 41	Primer 8f	(table 2)
SEQ ID N° 42	Primer 8g	(table 2)
SEQ ID N° 43	Primer gMPR1 for	(table 4)
SEQ ID N° 44	Primer gMPR1 rev	(table 4)
SEQ ID N° 45	Primer MRP104	(table 4)
SEQ ID N° 46	Primer MRP105	(table 4)
SEQ ID N° 47	Primer gMPR2 for	(table 4)
SEQ ID N° 48	Primer gMPR3 for	(table 4)
SEQ ID N° 49	Primer gMPR4 for	(table 4)
SEQ ID N° 50	Primer gMPR234 rev	(table 4)

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SEQ ID NO2 (gMRP1a)

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SEQ ID NO4 (gMRP1c)

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AGIVS

69

SEQ ID NO5 (gMRP1d)

>CDS undefined product 10739643:10744643 forward MW:169160
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AAB46616. multidrug resista...[gi:1835659]   BLink, Domains, Links

LOCUS   AAB46616   1531 aa   linear   PRI 10-FEB-1997
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ACCESSION   AAB46616
VERSION   AAB46616.1 GI:1835659
DBSOURCE   locus HUMMRPX accession L05628.1
KEYWORDS   .
SOURCE   Homo sapiens (human)
  ORGANISM Homo sapiens
          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
          Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1 (residues 1 to 1531)
  AUTHORS Cole,S.P., Bhardwaj,G., Gerlach,J.H., Mackie,J.E., Grant,C.E.,
          Almquist,K.C., Stewart,A.J., Kurz,E.U., Duncan,A.M. and Deeley,R.G.
  TITLE   Overexpression of a transporter gene in a multidrug-resistant human
          lung cancer cell line
  JOURNAL Science 258 (5088), 1650-1654 (1992)
  MEDLINE 93088080
  PUBMED   1360704
REFERENCE   2 (residues 1 to 1531)
  AUTHORS Stride,B.D., Valdimarsson,G., Gerlach,J.H., Wilson,G.M., Cole,S.P.
          and Deeley,R.G.
  TITLE   Structure and expression of the messenger RNA encoding the murine
          multidrug resistance protein, an ATP-binding cassette transporter
  JOURNAL Mol. Pharmacol. 49 (6), 962-971 (1996)
  MEDLINE 96251691
  PUBMED   8649356
REFERENCE   3 (residues 1 to 1531)
  AUTHORS Gerlach,J.H.
  TITLE   Direct Submission
  JOURNAL Submitted (30-JAN-1997) Cancer Research Labs, Queen's University,
          Kingston, ON K7L 3N6, Canada
COMMENT   On Feb 10, 1997 this sequence version replaced gi:292333.
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      121 tfliqlerrk gvqssgimlt fwlvalvcal ailrskimta lkedaqvdlf rditfyvyfs
      181 llliqlvlsc fsdrsplfse tihdpnpcpe ssasflsrit fwwitglivr gyrqplegsd
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      721 slrenilfgc qleepyyrsv iqacallpdl eilpsgdrte igekgvnlsg gqkqrvslar
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1501 dkgeiqeyga psdllqqrgl fysmakdagl v
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NCBI | NLM | NIH

SEQ ID NO 7-15 (variants exons 4 and 8 DmMRP).doc
SEQUENCES OF *D. melanogaster* IN FIGURE 4

Drosophila melanogaster Exon 4 variants (amino acids encoded by exons 4a and 4b)

exon 4a VSLVTFATYVLTSEANQLSVEKVLVSIALFDLMKLPLTILPMLSVDIAE

exon 4b VSLVTFATYVLIDENNVLDATKTFVSLSLFNILRFPLTMLPMLITNLVQ

Drosophila melanogaster Exon 8 variants (amino acids encoded by exons 8a to 8g) :

exon 8a
ATNFFSSLAISLGCLKCSQLLHQTLLYYNLRWPMELFDTTPLGRIVNRFSKDIDTIDNVLPFNIRVVIGQAYM

exon 8b
VTGYLSTLILSLGCVYSARYMHNVLLHGTLRWPMEMFDITPLGRIVNRFSKDVDTIDNTLPLNLRVVILQLF
A

exon 8c
TSYFFCSLTLALGCIPCSKVLHETLLSYVFRWPMELFDTTPLGRVVNRFSKDVDTIDNVLPMLWRMVISQAF
A

exon 8d
LSKYLSGLALAIGGLHCSMNVFNKLLNTGLKWPMELFDTTPLGRILSRYSKDVDTVDSVLPAITVQLLNTC
FG

exon 8e
VLAYFAVVIVYLGGFQAAKTIHNELLAVIIRGSVCRFFDITPIGRLLNSFSGDMDVVDEELPATMDSFMTFIF
M

exon 8f
LCNYGAAISLFTATLHASSRVFHRLFNNIMHCPSEFFDTTPKGRILDRCSSDVNCLDLVMPLNIRMVMSTAF
Q

exon 8g
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FE

73

DmMRP4a8a

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>CDS undefined product 8660:30368 forward MW:172450
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>CDS undefined product 8660:30368 forward MW:172569
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>CDS undefined product 8660:30368 forward MW:172085
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>CDS undefined product 8660:30368 forward MW:172309
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>CDS undefined product 8660:30368 forward MW:172311
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>CDS undefined product 8660:30368 forward MW:172246
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>CDS undefined product 8660:30368 forward MW:172704
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>CDS undefined product 8660:30368 forward MW:172643
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VANDTGLRDMYLGVYGAFGFGQVVTGYLSTLILSLGCVYSARYMHNVLLHGTLRWPMEMF
DITPLGRIVNRFSKDVDTIDNTLPLNLRVVILQLFAVLATIVVISLSTPIFLAVIVPIAF
LYYFAQRFYVATSRQLMRLESVSRSPIYSHFSETVTGASTIRAYNVGDRFIEESDAKVDK
NQVCKYPSVIANRWLAIRLEMVGNLIILFASLFAVLGGQTNPGLVGLSVSYALQVTQTLN
WLVRMSSDIETNIVSVERIKEYGETKQEAPWELEQDKNKPKNWPQEGRVEFQNFQVRYRE
GLDLVLRGVSFNIQGGEKVGIVRTGAGKSSLTLALFRIIEAAGGRISIDGVDIASMGLH
MLRSRLTIIPQDPVLFSGSLRINLDPFEIKTDDEIWKALELSHLKSFVKSLAAGLNHEIA
EGGENLSVGQRQLVCLARALLRKTKVLVLDEATAAVDLETDDLIQKTIRTEFKECTVLTI
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DmMRP4b8c

>CDS undefined product 8660:30368 forward MW:172762
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FLLLFIFIPLNRKYGVQTTGCQFIFWFLLTVLSIPRCRTEVRLDAERQKILNSQQPSEQD
FSWEEYQFVSFFIFFTFTSIMLILNCFADGMPRQTKYQRGENEIPELSASFLSRITYQWF
DKMALKGYRNPLEEKDLWDLRPQDSCSEVMPIFAHHWNQNVRKNYKNKARVEPKAQFSNG
NVTFENPHGEKNGRKKGMASIMPPIYKSFGGVFLFGALMKLFTDTLTFAQPQVLSLIISF
VEAQDAEPEWKGILYAVLLFVLAAAQTFILGQYFHRMFIVGLRIRTALINAIYRKALRIS
NSTKKESTVGEIVNLMAVDAQRFMELTTYLNMIWSAPLQIGLALYFLWQQLGPSVLAGLA
VMIILIPVNGVIASRIKTYQIRQMKYKDERVKLMNEVLSGIKVLKLYAWEPSFEKQVLDI
RDKEIATLRSTAYLNAGTSFLWSCAPFLVSLVTFATYVLIDENNVLDATKTFVSLSLFNI
LRFPLTMLPMLITNLVQTQVSVNRINKFLNSEELDPNSVLHDSSKPHPMSIENGEFSWGD
EITLRNINIEVKKGSLVALVGTVGSGKSSVVQAFLGEMEKLAGVVNTVGKLAYVPQQAWI
QNATVRDNILFGQTYDRKRYNKVIDACALRADIDILSAGDLTEIGEKGINLSGGQKQRIS
LARAVYSDADLYLLDDPLSAVDAHVGKHIFEEVIGPKGILARKSRVLVTHGVTFLPQVDS
IYVIKMGEISESGTFDQLVKNKGAFADFIIQHLQEGNEEEEELNQIKRQISSTADVPELL
GTVEKAIKLARTESLSDSISVTSADSLMGGGGSLRRRTKRQDSHDSVASAASLKKKQEVE
GKLIETEKSQTGGVEFAVYKHYIKSVGIFLSVATLVLNFVFQAFQIGSNLWLTQWANDQN
VANDTGLRDMYLGVYGAFGFGQVTSYFFCSLTLALGCIFCSKVLHETLLSYVFRWPMELF
DTTPLGRVVNRFSKDVDTIDNVLPMLWRMVISQAFAVLATIVVISLSTPIFLAVIVPIAF
LYYFAQRFYVATSRQLMRLESVSRSPIYSHFSETVTGASTIRAYNVGDRFIEESDAKVDK
NQVCKYPSVIANRWLAIRLEMVGNLIILFASLFAVLGGQTNPGLVGLSVSYALQVTQTLN
WLVRMSSDIETNIVSVERIKEYGETKQEAPWELEQDKNKPKNWPQEGRVEFQNFQVRYRE
GLDLVLRGVSFNIQGGEKVGIVGRTGAGKSSLTLALFRIIEAAGGRISIDGVDIASMGLH
MLRSRLTIIPQDPVLFSGSLRINLDPFEIKTDDEIWKALELSHLKSFVKSLAAGLNHEIA
EGGENLSVGQRQLVCLARALLRKTKVLVLDEATAAVDLETDDLIQKTIRTEFKECTVLTI
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DmMRP4b8e

>CDS undefined product 8660:30368 forward MW:172502
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FLLLFIFIPLNRKYGVQTTGCQFIFWFLLTVLSIPRCRTEVRLDAERQKILNSQQPSEQD
FSWEEYQFVSFFIFFTFTSIMLILNCFADGMPRQTKYQRGENEIPELSASFLSRITYQWF
DKMALKGYRNPLEEKDLWDLRPQDSCSEVMPIFAHHWNQNVRKNYKNKARVEPKAQFSNG
NVTFENPHGEKNGRKKGMASIMPPIYKSFGGVFLFGALMKLFTDTLTFAQPQVLSLIISF
VEAQDAEPEWKGILYAVLLFVLAAAQTFILGQYFHRMFIVGLRIRTALINAIYRKALRIS
NSTKKESTVGEIVNLMAVDAQRFMELTTYLNMIWSAPLQIGLALYFLWQQLGPSVLAGLA
VMIILIPVNGVIASRIKTYQIRQMKYKDERVKLMNEVLSGIKVLKLYAWEPSFEKQVLDI
RDKEIATLRSTAYLNAGTSFLWSCAPFLVSLVTFATYVLIDENNVLDATKTFVSLSLFNI
LRFPLTMLPMLITNLVQTQVSVNRINKFLNSEELDPNSVLHDSSKPHPMSIENGEFSWGD
EITLRNINIEVKKGSLVALVGTVGSGKSSVVQAFLGEMEKLAGVVNTVGKLAYVPQQAWI
QNATVRDNILFGQTYDRKRYNKVIDACALRADIDILSAGDLTEIGEKGINLSGGQKQRIS
LARAVYSDADLYLLDDPLSAVDAHVGKHIFEEVIGPKGILARKSRVLVTHGVTFLPQVDS
IYVIKMGEISESGTFDQLVKNKGAFADFIIQHLQEGNEEEEELNQIKRQISSTADVPELL
GTVEKAIKLARTESLSDSISVTSADSLMGGGGSLRRRTKRQDSHDSVASAASLKKKQEVE
GKLIETEKSQTGGVEFAVYKHYIKSVGIFLSVATLVLNFVFQAFQIGSNLWLTQWANDQN
VANDTGLRDMYLGVYGAFGFGQGVLAYFAVVIVYLGGFQAAKTIHNELLAVIIRGSVCRF
FDITPIGRLLNSFSGDMDVVDEELPATMDSFMTFIFMVLATIVVISLSTPIFLAVIVPIA
FLYYFAQRFYVATSRQLMRLESVSRSPIYSHFSETVTGASTIRAYNVGDRFIEESDAKVD
KNQVCKYPSVIANRWLAIRLEMVGNLIILFASLFAVLGGQTNPGLVGLSVSYALQVTQTL
NWLVRMSSDIETNIVSVERIKEYGETKQEAPWELEQDKNKPKNWPQEGRVEFQNFQVRYR
EGLDLVLRGVSFNIQGGEKVGIVGRTGAGKSSLTLALFRIIEAAGGRISIDGVDIASMGL
HMLRSRLTIIPQDPVLFSGSLRINLDPFEIKTDDEIWKALELSHLKSFVKSLAAGLNHEI
AEGGENLSVGQRQLVCLARALLRKTKVLVLDEATAAVDLETDDLIQKTIRTEFKECTVLT
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DmMRP4b8f

>CDS undefined product 8660:30368 forward MW:172504
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FLLLFIFIPLNRKYGVQTTGCQFIFWFLLTVLSIPRCRTEVRLDAERQKILNSQQPSEQD
FSWEEYQFVSFFIFFTFTSIMLILNCFADGMPRQTKYQRGENEIPELSASFLSRITYQWF
DKMALKGYRNPLEEKDLWDLRPQDSCSEVMPIFAHHWNQNVRKNYKNKARVEPKAQFSNG
NVTFENPHGEKNGRKKGMASIMPPIYKSFGGVFLFGALMKLFTDTLTFAQPQVLSLIISF
VEAQDAEPEWKGILYAVLLFVLAAAQTFILGQYFHRMFIVGLRIRTALINAIYRKALRIS
NSTKKESTVGEIVNLMAVDAQRFMELTTYLNMIWSAPLQIGLALYFLWQQLGPSVLAGLA
VMIILIPVNGVIASRIKTYQIRQMKYKDERVKLMNEVLSGIKVLKLYAWEPSFEKQVLDI
RDKEIATLRSTAYLNAGTSFLWSCAPFLVSLVTFATYVLIDENNVLDATKTFVSLSLFNI
LRFPLTMLPMLITNLVQTQVSVNRINKFLNSEELDPNSVLHDSSKPHPMSIENGEFSWGD
EITLRNINIEVKKGSLVALVGTVGSGKSSVVQAFLGEMEKLAGVVNTVGKLAYVPQQAWI
QNATVRDNILFGQTYDRKRYNKVIDACALRADIDILSAGDLTEIGEKGINLSGGQKQRIS
LARAVYSDADLYLLDDPLSAVDAHVGKHIFEEVIGPKGILARKSRVLVTHGVTFLPQVDS
IYVIKMGEISESGTFDQLVKNKGAFADFIIQHLQEGNEEEEELNQIKRQISSTADVPELL
GTVEKAIKLARTESLSDSISVTSADSLMGGGGSLRRRTKRQDSHDSVASAASLKKKQEVE
GKLIETEKSQTGGVEFAVYKHYIKSVGIFLSVATLVLNFVFQAFQIGSNLWLTQWANDQN
VANDTGLRDMYLGVYGAFGFGQGLCNYGAAISLFTATLHASSRVFHRLFNNIMHCPSEFF
DTTPKGRILDRCSSDVNCLDLVMPLNIRMVMSTAFQVLATIVVISLSTPIFLAVIVPIAF
LYYFAQRFYVATSRQLMRLESVSRSPIYSHFSETVTGASTIRAYNVGDRFIEESDAKVDK
NQVCKYPSVIANRWLAIRLEMVGNLIILFASLFAVLGGQTNPGLVGLSVSYALQVTQTLN
WLVRMSSDIETNIVSVERIKEYGETKQEAPWELEQDKNKPKNWPQEGRVEFQNFQVRYRE
GLDLVLRGVSFNIQGGEKVGIVGRTGAGKSSLTLALFRIIEAAGGRISIDGVDIASMGLH
MLRSRLTIIPQDPVLFSGSLRINLDPFEIKTDDEIWKALELSHLKSFVKSLAAGLNHEIA
EGGENLSVGQRQLVCLARALLRKTKVLVLDEATAAVDLETDDLIQKTIRTEFKECTVLTI
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drMRP4b8g

>CDS undefined product 8660:30396 forward MW:173533
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FLLLFIFIPLNRKYGVQTTGCQFIFWFLLTVLSIPRCRTEVRLDAERQKILNSQQPSEQD
FSWEEYQFVSFFIFFTFTSIMLILNCFADGMPRQTKYQRGENEIPELSASFLSRITYQWF
DKMALKGYRNPLEEKDLWDLRPQDSCSEVMPIFAHHWNQNVRKNYKNKARVEPKAQFSNG
NVTFENPHGEKNGRKKGMASIMPPIYKSFGGVFLFGALMKLFTDTLTFAQPQVLSLIISF
VEAQDAEPEWKGILYAVLLFVLAAAQTFILGQYFHRMFIVGLRIRTALINAIYRKALRIS
NSTKKESTVGEIVNLMAVDAQRFMELTTYLNMIWSAPLQIGLALYFLWQQLGPSVLAGLA
VMIILIPVNGVIASRIKTYQIRQMKYKDERVKLMNEVLSGIKVLKLYAWEPSFEKQVLDI
RDKEIATLRSTAYLNAGTSFLWSCAPFLVSLVTFATYVLIDENNVLDATKTFVSLSLFNI
LRFPLTMLPMLITNLVQTQVSVNRINKFLNSEELDPNSVLHDSSKPHPMSIENGEFSWGD
EITLRNINIEVKKGSLVALVGTVGSGKSSVVQAFLGEMEKLAGVVNTVGKLAYVPQQAWI
QNATVRDNILFGQTYDRKRYNKVIDACALRADIDILSAGDLTEIGEKGINLSGGQKQRIS
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IYVIKMGEISESGTFDQLVKNKGAFADFIIQHLQEGNEEEELNQIKRQISSTADVPELL
GTVEKAIKLARTESLSDSISVTSADSLMGGGGSLRRRTKRQDSHDSVASAASLKKKQEVE
GKLIETEKSQTGGVEFAVYKHYIKSVGIFLSVATLVLNFVFQAFQIGSNLWLTQWANDQN
VANDTGLRDMYLGVYGAFGFGQGFTSFFSDLAPALGSLHAAKVLHSMLLENVLRAPMTMF
DTTPVGRILSRFSKDVESVDQKMPQVINDCIWCAFEVLATIVVISLSTPIFLAVIVPIAF
LYYFAQRFYVATSRQLMRLESVSRSPIYSHFSETVTGASTIRAYNVGDRFIEESDAKVDK
NQVCKYPSVIANRWLAIRLEMVGNLIILFASLFAVLGGQTNPGLVGLSVSYALQVTQTLN
WLVRMSSDIETNIVSVERIKEYGETKQEAPWELEQDKNKPKNWPQEGRVEFQNFQVRYRE
GLDLVLRGVSFNIQGGEKVGIVGRTGAGKSSLTLALFRIIEAAGGRISIDGVDIASMGLH
MLRSRLTIIPQDPVLFSGSLRINLDPFEIKTDDEIWKALELSHLKSFVKSLAAGLNHEIA
EGGENLSVGQRQLVCLARALLRKTKVLVLDEATAAVDLETDDLIQKTIRTEFKECTVLTI
AHRLNTILDSDKVIVLDKGQIIEFASPTELLDNPKSAFYSMAKDANLV